

# Solitary Testicular Metastasis from Prostate Cancer

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**Abstract:** ***Aim:** To report a rare case of solitary testicular metastasis from prostatic adenocarcinoma and emphasize its clinical and pathological significance. **Objectives:** To describe the clinical presentation, histopathological findings, and possible mechanisms of testicular metastasis in a patient with prostate cancer. **Discussion:** Testicular metastasis from prostate cancer is extremely rare and usually indicates advanced disease. A 53-year-old male presented with urinary symptoms and unilateral testicular enlargement. Investigations revealed elevated serum PSA levels and prostatic adenocarcinoma with a Gleason score of 7 (3+4). Histopathological examination of the orchiectomy specimen showed gland-forming tumor deposits within the testicular parenchyma, consistent with metastatic adenocarcinoma. The proposed mechanisms of spread include retrograde venous or lymphatic dissemination, arterial embolism, and endocanalicular extension. Due to its rarity, testicular metastasis may be overlooked clinically, underscoring the importance of thorough evaluation.*

**Keywords:** Prostate cancer; Testicular metastasis; Prostatic adenocarcinoma; Orchiectomy; Rare metastasis

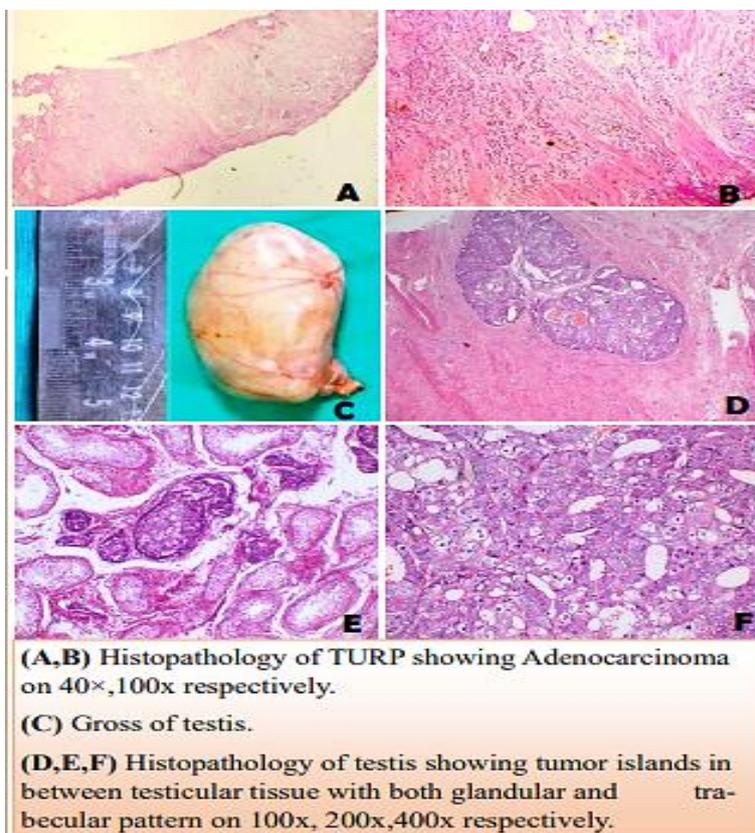
## 1. Introduction

Secondary neoplasms of the testis are rare, accounting for approximately 0.02–2.5% of all testicular tumors. Metastasis of carcinoma of the prostate to the testis is uncommon.<sup>1</sup> Prostatic adenocarcinoma most frequently metastasizes to pelvic lymph nodes, bones, and lungs, followed by organs such as the liver, brain, and bladder.<sup>2</sup> Therefore, it is important to consider rare metastatic sites, including the testis, particularly in advanced disease.

## 2. Case History

A 53-year-old male presented with urinary symptoms and gradual enlargement of the right testis for the past four months.

- Digital rectal examination revealed a Grade II hard and nodular prostate.
- Serum prostate-specific antigen (PSA) level was 157 ng/dL.
- Ultrasonography revealed an enlarged prostate.
- Transurethral resection of the prostate showed prostatic adenocarcinoma with a Gleason score of 7 (3+4).
- Ultrasonography of the scrotum revealed an enlarged testis with heterogeneous ill-defined areas.
- The patient underwent bilateral orchiectomy after one month, and the specimens were sent for histopathological examination.
- Histopathological examination of the testis showed tumor islands forming glandular architecture within the testicular tissue, suggestive of metastatic adenocarcinoma.



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### 3. Discussion

Testicular metastasis is a rare entity and constitutes approximately 0.9% of all testicular tumors. The prostate, followed by lung, skin, and kidney, are the most common primary sites, accounting for 35%, 18%, 11%, and 9% of testicular metastases, respectively. Metastasis of prostate cancer to the testis is much less common compared to other metastatic sites such as pelvic lymph nodes, bone, lung, liver, and brain.

Possible mechanisms of testicular metastasis include retrograde venous spread or embolism, arterial embolism, lymphatic extension, and endocanalicular spread.<sup>3</sup> Involvement of the prostatic urethra may further increase the risk of testicular metastasis.<sup>4</sup> Due to the rarity of this condition, precise prognostic factors remain unclear.

### 4. Conclusion

Metastasis of prostate cancer to the testis is a rare occurrence and represents an ominous sign of advanced disease.

### References

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